



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/740,200	12/18/2003	Charles R. Obranovich	SYS-P-1230 (8364-90585)	2226
7590 04/30/2008 Patent Services Group Honeywell International, Inc. 101 Columbia Road P. O. Box 2245 Morristown, NJ 07962			EXAMINER PAUL, DISLER	
			ART UNIT 2615	PAPER NUMBER
			MAIL DATE 04/30/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/740,200	Applicant(s) OBRANOVICH ET AL.	
	Examiner DISLER PAUL	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-28,32 and 35-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2-28,32 and 35-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/21/4;5/31/5</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed May, 22,07 have been fully considered but they are not persuasive. With respect to the added limitation for claims 32, the examiner believed such added limitation is unpatentable over Finn et al. (US 2002/0141601 A1).

Furthermore, the examiner has read the "SNR" wherein indicating the desired speech among undesired speech as the intelligible audio output, or speech intelligibility as disclosed by the applicant.

However, the last finality have been withdrawn in view of the disqualification of Faltsek et al. (US 2005/0105743) based on the common assignee.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2, 4-14, 16-20, 27, 32,35-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Finn et al. (US 2002/0141601 A1).

Re claim 2, Finn et al. disclosed a system comprising: a plurality of fixedly mountable microphones ("fig.10/(508,552,554,556); page 10[0074] line 1-2"); and circuits coupled to respective microphones including circuitry for evaluating intelligibility of audio received by the respective microphones ("fig.10/(570,572,574,576)-to analyzed the intelligibility of the respective microphones and page 10[0074] line 5-8") and generating an indicator of intelligibility on a per microphone basis, the circuits each include a network output port ("fig.10/(580,582,584,586)-output indicator for each respective intelligibility analyzed microphones/ which is in itself the output port being outputted at (578)"), the circuits each include a network output port and which includes a plurality of ambient condition detectors with at least some of microphones carried by respective ones of the detectors (fig.10 ; par[0045-0046/seat or occupant sensor with the sensor").

Re claim 4, Finn et al. disclosed a system comprising: a plurality of fixedly mountable microphones ("fig.10/(508,552,554,556); page 10[0074] line 1-2"); and circuits coupled to respective microphones including circuitry for evaluating intelligibility of audio received by the respective microphones ("fig.10/(570,572,574,576)-to analyzed the intelligibility of the respective microphones and page 10[0074] line 5-8 and see fig.1 wt (36,38)") and generating an indicator of intelligibility on a per microphone basis, the circuits each include a network output port

Art Unit: 2615

("fig.10/(580,582,584,586)-output indicator for each respective intelligibility analyzed microphones/ which is in itself the output port being outputted at (578)"), and circuitry that produces speech intelligibility test signals and include audio output device which will audibly produce the speech intelligibility test signals which will be received by the microphones ("Finn,fig.10-the device speaker output of (514)-to be pick up by the microphones at fig.9/(512)respectively for speech intelligibility & page 2[0025]/(32,36) and see fig.1,7").

Re claim 5, a system as in claim 4, which includes control circuits coupled to the microphones and the audio output device, the control circuits couple electrical representations of the speech intelligibility test signals to the output device ("Finn,fig.10/(578);page 10[0076] line 8-10").

Re claim 6, a system as in claim 5 which includes a plurality of audio output devices coupled to the control circuits ("Finn,fig./10-with the plurality of output devices (514,558,560").

Re claim 7 has been analyzed and rejected with respect to claim 2 above.

Re claim 8, a system as in claim 7 where at least some of the detectors carry respective ones of the microphones ("see claim 2 rejections).").

Re claim 9, Finn disclosed of the system comprising: a plurality of fixedly mountable microphones; circuits coupled to respective microphones including circuitry for evaluating intelligibility of audio received by the respective microphones and generating an indicator of intelligibility on a per microphone basis ("fig.1,7,10/(570,572,574,576)-to analyzed the intelligibility of the respective microphones and page 10[0074] line 5-8 and see fig.1 wt (36,38)")), the circuits each include a network output port and where the control circuits including the inherent of executable instructions for producing speech intelligibility test signals to be audibly output by the at least one audio output device ("Finn,fig.1,7,9; 10-the device speaker output/broadcast of (514)- respectively for speech intelligibility & page 2[0025]/(32,36) and see fig.8/processor enable to perform generate tones and broadcast signals")).

Re claim 10, the System as in claim 9 which includes additional executable instructions for processing the speech intelligibility test signals received from the respective microphones (fig.10/ with processor to determine intellegibility).

Re claim 11, Finn et al. disclose of the method comprising: generating providing at least one machine generated at least one speech intelligibility test signal("fig.10/(514-558)-to generate speech intelligibility, fig.1 (32,34)-loudspeaker, fig.8, par[0066])"); sensing the speech intelligibility test signal at least one fixed location ("fig.10/(508,552,556)-so to sense the speech intelligibility; fig.1 (36,28)"); evaluating the intelligibility of the sense speech intelligibility test signal("fig.10/(570-576) to evaluate the speech intelligibility, fig.1 (40)").

Re claim 12, a method as in claim 11, which includes generating a plurality of speech intelligibility test signal("par[0043])").

Re claim 13, a method as in claim 11 which includes sensing the speech intelligibility test signal at a plurality of spaced apart, fixed locations ("fig.10/(508,552,554)").

Re claim 14, a method as in claim 13 which includes: transmitting the sensed speech intelligibility test signal from the plurality of locations to a common site and then processing same to evaluate intelligibility thereof ("fig.10/ all the many sensed speech pick at (508,556) is analyzed((570-576) and sent to (578)").

Re claim 16, a method as in claim 14 where the sensed speech intelligibility test signals receive initial processing prior to being coupled to the common site ("fig.10-the initial process at (570-576) prior to couple to common site at (578)").

Re claim 17, the method as in claim 16, with the initial processing conducted on a per location basis and where initially processed result are each indicative of intelligibility of audio (fig.10,1 see claim 16 rejection).

Re claim 18, Finn et al. discloses an apparatus comprising: at least one ambient condition sensor (par[0045-0046]); a microphone coupled to a control circuits ("fig.10/508-556; page 10 [0074] line 1-2"), However, while, Finn et al. is silent in regard to the control circuits couple to the sensor. But, Finn et al. did disclose of the sensor with use enable the system to select the most appropriate microphone for better performance (par[0045-0046]). thus with the above disclosure, it is inherent of the existence of such control circuits couple to the sensor, the control circuits establishing an intelligibility index in response to signals from the microphone ("fig.10/(570-576); page 10[0075]").

Re claim 19, an apparatus as in claim 18, which provides at least one port for connection of external microphones ("Finn,fig.10-all microphones are connected via port/medium heading to switch (578)").

Re claim 20, an apparatus as in claim 18, which include the network communications port (fig.1,10/interchange of communications).

Re claim 27, an apparatus comprising: a microphone with an electrical output corresponding to incident audio; control circuits coupled to the microphone, the control circuits implement intelligibility processing in connection with incident audio; the network communications port (see claims 1,20).

Re claim 32, Finn et al. disclose of a system comprising: control circuits for producing electrical representations of speech intelligibility test signals; at least one audible output device coupled to the control circuits to audibly emit the speech intelligibility test signals ("Finn,fig.10-(514), loudspeaker to broadcast speech signals, fig.1 wt (32,34)"), and a plurality of spaced apart acoustic sensors; and circuits coupled to the respective acoustic sensors including circuitry for evaluating intelligibility of audio received by the respective acoustic sensors and generating an indicator of intelligibility on a per acoustic sensor basis (fig.10, par[0074]).

Re claim 35, a system as in claim 32, which include a plurality of audio output devices coupled to the control circuits (fig.1 (32,34)).

Re claim 36, the system as in claim 32 which includes a plurality of distributed ambient condition detectors (par[0045-0046,0048]).

Re claim 37, has been analyzed and rejected with respect to claim 2.

Re claims 38-39, have been analyzed and rejected with respect to claims 9-10 respectively.

2. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Finn et al. ("US 2002/0141601 A1") and further in view of Watson et al. (US 7,136,494 B2).

Re claim 28, an apparatus as in claim 27, however, Finn et al. fail to disclose the housing attachable to a mounting surface. However, Watson et al. disclose of the housing attachable to a mounting surface (col.2 line 1-5, col.2 line 30-36) for purpose of improving hands free performance in a vehicle communication. Thus, taking the combined teaching of Finn et al. and Watson et al. as a whole, it would have been obvious for one of the ordinary skill in the art at the time of the invention to have modify Finn et al. by incorporating the housing attachable to a mounting surface for purpose of improving hands free performance in a vehicle communication.

3. Claims 22- 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finn et al. ("US 2002/0141601 A1") and further in view of Symons et al. (US 2004/0037437 A1).

Re claim 22, the apparatus as in claim 18 with the ambient condition sensor, However, Finn et al. fail to disclose of the wherein the ambient condition sensor comprises at least one of a smoke sensor, a flame sensor, a thermal sensor or a gas sensor. However, Symons et al. disclose of the alerting device wherein the ambient condition sensor comprises a smoke sensor, a flame sensor (fig.7, par [0153]) for the purpose of compensating for temperature speed conditions traveling in the microphone to minimise pick up of unwanted sound . Thus, taking the combined teaching of Finn et al. and Symons et al. as a whole, it would have been obvious for one of the ordinary skill in the art at the time of the invention to have modify Finn et al. by incorporating the ambient condition sensor comprises a smoke sensor, a flame sensor for the purpose of compensating for temperature speed conditions traveling in the microphone to minimise pick up of unwanted sound.

Re claim 23, the apparatus as in claim 22, wherein the control circuits include a processor with executable instructions for carrying out intelligibility index processing (fig.10/processing for SNR).

Re claim 24, an apparatus as in claim 23 which includes a network communications port, the port facilitating coupling electrical energy to at least the control circuits, and coupling intelligibility indices at least from the control circuits to a medium (fig.1-2; page 1[0004] line 10-16/speech signals to be transferred zone to zone).

Re claim 25, an apparatus as in claim 24 where the communications port includes an interface for carrying out bi-directional communication via a medium ("fig.1-2; bidirectional-zone-to zone").

7. Claims 3, 15, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finn et al. ("US 2002/0141601 A1").

Re claims 3, the system in claim 2, with the circuits with ambient detectors with microphone carried by the detectors. However, Finn et al. fail to disclose of the specific of the circuits wherein the circuits carries by respective one of the detectors coupled to the respective microphones also carried by the same detector. However, Official notice is taken the concept of having the circuits

specifically wherein the circuits carries by respective one of the detectors coupled to the respective microphones also carried by the same detector is simply the inventor's preference, thus it would have been obvious for one of the ordinary skill in the art to have modify Finn et al. by incorporating the circuits specifically wherein the circuits carries by respective one of the detectors coupled to the respective microphones also carried by the same detector for selecting the most appropriate microphones to ensure the system performance.

Re claim 15, a method as in claim 14 with the processing of result, However, Finn et al. fail to disclose the method of processing being visually presenting processing results. However, official notice is taken the concept of visually presenting processing results is commonly known in the art, thus it would have been obvious for one of the ordinary skill in the art to have modify Finn et al. by incorporating the concept of visually presenting processing results for enable the user analyzed the result on the screens.

Re claim 26, the apparatus as in claim 25, however, Finn et al. fail to teach of the interface includes circuits coupled to at least one of an electrical cable or an optical cable. However, Official Notice is taken that having interface includes circuits coupled to at least one of an electrical cable or an optical cable is commonly known

in the art, thus it would have been obvious for one ordinary skill in the art to have the interface includes circuits coupled to at least one of an electrical cable or an optical cable for purpose of transmitting user input signals to the output loudspeakers.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Finn et al. ("US 2002/0141601 A1") and further in view of Kenneth Dylan Jacob ("US 2002/0099551 A1"),

Re claim 21, an apparatus as in claim 20, however, Finn et al. fail to teach the intelligibility index comprises at least one of STI, RASTI, SII, or, a subset of one of STI, RASTI, SII. But Jacob discloses an audio spectrum analyzer in which the intelligibility index comprises at least one of STI, RASTI, SII, or, a subset of one of STI, RASTI, SII. ("page 1[0005-0007]") for the purpose of measuring the speech intelligibility of sound signals. Thus, taking the combined teaching of Finn et al and Jacob as a whole, it would have been obvious for one of ordinary skill in the art to modify Finn et al., by incorporating the intelligibility index comprises at least one of STI, RASTI, SII, or, a subset of one of STI, RASTI, SII for the purpose of measuring the speech intelligibility of sound signals.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Disler Paul whose telephone number is 571-270-1187. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. P./

Examiner, Art Unit 2615

/Vivian Chin/

Supervisory Patent Examiner, Art Unit 2615